

## Rogers County, Oklahoma

### BdC2—Bates and Dennis soils, 3 to 5 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 3kzc

*Elevation:* 500 to 2,800 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 57 to 64 degrees F

*Frost-free period:* 170 to 235 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Bates, eroded, and similar soils:* 55 percent

*Dennis, eroded, and similar soils:* 40 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Bates, Eroded

##### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy residuum weathered from sandstone and shale

##### Typical profile

*A - 0 to 10 inches:* loam

*Bt - 10 to 24 inches:* clay loam

*BC - 24 to 30 inches:* clay loam

*Cr - 30 to 35 inches:* bedrock

##### Properties and qualities

*Slope:* 3 to 5 percent

*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):*

Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Low (about 5.5 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* C

*Ecological site:* Eroded Loamy Prairie PE 62-80 (R112XY856OK)  
*Other vegetative classification:* Unnamed (G112XY073OK)

## Description of Dennis, Eroded

### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Clayey residuum weathered from shale

### Typical profile

*A - 0 to 10 inches:* silt loam  
*BA - 10 to 14 inches:* loam  
*Bt1 - 14 to 30 inches:* clay loam  
*Bt2 - 30 to 62 inches:* clay

### Properties and qualities

*Slope:* 3 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 12 to 30 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* High (about 10.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C/D  
*Ecological site:* Eroded Loamy Prairie PE 62-80 (R112XY856OK)  
*Other vegetative classification:* Unnamed (G112XY091OK)

## Minor Components

### Linker, eroded

*Percent of map unit:* 5 percent  
*Landform:* Hillslopes on hills  
*Landform position (two-dimensional):* Backslope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* Eroded Sandy Savannah (R117XY875OK)  
*Other vegetative classification:* Unnamed (G117XY099OK)

## Data Source Information

Soil Survey Area: Rogers County, Oklahoma  
Survey Area Data: Version 10, Sep 11, 2015